



BEAKY BIRDS FIELD KIT



List of Contents - Beaky Birds Backpack

Activity Notebook:

Introduction to the Backpack

Ethical Behavior

Educator's Resource Guide

Trail Guide to animals

Map of Salato and hiking trails

Map of Outdoor Classroom

Activity instructions: 1) Spears, Shovels, and Nutcrackers

2) Bird Behavior Scavenger Hunt (Project Flying WILD)

3) Ecology Bingo

4) Instructor's Journal

Bird Observation Forms

Evaluation Forms

Books/Guides:

Bird guide

Eastern Forest guide

Notepad of blank paper

Equipment:

Binoculars (4 pairs)

Alcohol wipes - to clean hands and activity cards

Dry erase pens

Bird calls (3)

Pencils



Introduction to the Beaky Birds Backpack

Welcome to Kentucky Department of Fish and Wildlife Resources' Salato Wildlife Education Center. There are countless opportunities for you and your students to explore the natural habitats and wildlife of Kentucky. Please encourage safe discovery during your visit and enjoy.

You have chosen the **Beaky Birds Backpack** for activities and information about the wildlife native to Kentucky. Activities are designed for children 1st through 8th grade. Instructions and materials for each activity are contained. Activities include ecology bingo, bird field guides, Project Flying WILD's Bird Behavior Scavenger Hunt materials, "Spears, Shovels, and Nutcrackers" activity and other resources. These activities provide ample opportunities for post-visit classroom discussion. Feel free to explore with your students and ask questions of our staff.

Emergencies

Restrooms are located in the front of the building near the main entrance. Phones are available at the front desk for local and emergency calls only.

If necessary, a first aid kit and defibrillator are located in the staff office across from the Warm Water Aquarium in the exhibit hall. Any staff member can assist you or your students with these items during your visit.

Storm shelters are located in the bathrooms near the front door of Salato. Staff members will observe weather, alert you to any changing conditions, and direct you and your students to safety.



Ethical Behavior for Salato Visitors

We welcome all persons to visit Salato Wildlife Education Center! We do ask that each visitor respect the resident wildlife at the center. Wildlife includes each animal on exhibit as well as every plant that grows within the center's boundaries. Our staff has taken great efforts to provide the public with intact and healthy examples of the beautiful habitats found in Kentucky.

Do's

- Take pictures and memories
- Ask questions
- Observe your surroundings
- Enjoy the behaviors of our animals
- Stay on the paved trail
- Enjoy the picnic areas
- Fish at the KDFWR Headquarter's Lakes

Don'ts

- Pick flowers or other vegetation
- Leave with unasked question
- Throw rocks or sticks
- Tease, feed, or pet the animals
- Wander away from the group or jump fences
- Bring food into the center
- Wade in the Living Stream or Dragonfly Marsh





Kentucky Department of Fish and Wildlife Resources
Salato Wildlife Education Center

#1 Sportsman's Lane, Frankfort, KY 40601
(502)564-7863 or (800)858-1549
fw.ky.gov

EDUCATOR RESOURCES

The Kentucky Department of Fish and Wildlife Resources and The Salato Wildlife Center offer many different resources to educators. For more information, contact us at (502) 564-7863. Admission is absolutely free, however, donations are always appreciated.

School Programs

Salato's staff will provide educational programs for students from kindergarten to high school. Educational programs are offered Tuesday, Wednesday, and Thursday at 9:00, 10:00, and 11:00 a.m. Programs available include birds of prey, KY reptiles and amphibians, KY mammals, KY's native people, and KY native plants. Groups are limited to 50 due to space constraints. Programs are tailored to the age and needs of the group. For more information, contact us at (502) 564-7863. To schedule a program, visit our website at ***fw.ky.gov***.

Self-Guided Tours

We are currently unable to provide guided tours of the Center, however, an interpretive guide brochure and maps are available. These tours do not need to be scheduled in advance, however, it does help our staff to prepare if we know how many groups we are to expect that day. Exhibits are indoors and outdoors and represent species native to Kentucky. Indoor exhibits include aquariums, venomous snakes, restoration efforts, and frogs and toads of Kentucky. Outdoors exhibits include a marsh, elk, deer, bald eagle, living stream, bobcats and specific habitat exhibits such as a mixed mesophytic forest and a prairie.

Scavenger Hunts

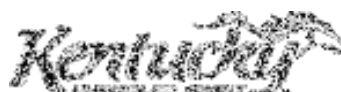
Scavenger hunts are available for all school children at no charge. This activity incorporates science, math and art. Copies of our scavenger hunts can be printed the website.

Teacher Field Kits

Salato is proud to introduce our Teacher Field Kit. The packs focus on different areas and subjects found at Salato with information and activities to do as you explore. Subjects include birds, bugs and snakes, biodiversity, and plants. All materials needed for the activities are provided in the pack. As an educator, all you have to do is bring your class and follow directions for a great self-guided experience. Call ahead to reserve the field kit.

Trails

Salato offers easy hiking trails on the premises. The HabiTrek Trail is an easy one-mile loop through forested and prairie habitats. Many natural features are located along the trail and lots of opportunities to observe wildlife in its native environment. Pea Ridge Trail and Warbler Ridge Trail are moderately strenuous and appropriate for middle school or older students only. The trail system is not wheelchair or stroller accessible.



Outdoor Classroom

Near the intersection of the Habitrek and Prairie Trails, Salato has an outdoor classroom. Special features of the classroom include trap doors, brush piles, ample bench seating, a teaching bench, and a view of multiple habitats.

Picnic Shelters and Fishing Opportunities

Two shelters are located on the premises. The shelters will accommodate up to 35 or 100 persons. A fee is required for reservation of either shelter. To schedule a picnic shelter, visit our website at fw.ky.gov. Picnic tables are available on a first come, first served basis. Two lakes are available, the upper lake is for all ages and the lower lake is for use by children 12 and under. Salato can provide poles for your children free of charge.

Gift Shop

In addition, browse the gift shop with items for everyone on your shopping list. Children are welcome in the gift shop with adult supervision. With large groups, we ask that 10 at a time visit and shop, as the space is small. Discounts are available for all Kentucky hunting, fishing, and boating license holders. Souvenirs are available in all price ranges.

Backyard Wildlife Habitat Program

Outdoor classrooms demonstrate the importance of providing quality wildlife habitat and children are rewarded by viewing the wildlife their hard work supports. Wildlife habitat surplus plants may be available for donation to a program with an outdoor classroom landscape plan. For more information or assistance with your outdoor classroom, contact us at (502) 564-5280.

Professional Development

The Kentucky Department of Fish and Wildlife and Salato Staff offer many opportunities for professional development. Workshops offered include Outdoor Classroom Development, Project WILD, Project WILD Aquatic, Project Flying WILD, Leopold Education Project, Project Archeology, and Native Presence: Exploring Contemporary Native American Cultures. These workshops are available for a nominal fee to educators.

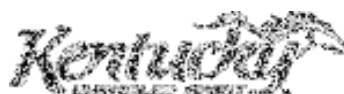
Weekend Programs

Salato offers many fun activities for all ages and expert instruction on subjects pertaining to native wildlife and people. Programs are designed to stimulate interest in fish and wildlife activities. Skills learned in some of these weekend programs may prepare you to teach similar activities in your classroom.

Additional Information

To ensure an atmosphere of learning, we request that at least one (1) adult accompany your tour for every ten (10) children in the group. All visitors should dress appropriately for the weather, since part of our exhibits are outdoors. Food is NOT permitted in the center or on the trails. Please make sure that all items are finished before you enter the facility. All of our outdoor exhibits are wheelchair and stroller accessible. With advanced notice, staff can provide interpreters for hearing-impaired guests. Please see our website at fw.ky.gov for more information or contact us at (502) 564-7863.

“Reconnecting people and nature... for life”



AN INTERPRETIVE GUIDE TO SALATO'S OUTDOOR TRAILS

Do you know where to go to hear an elk bugle or how a marsh is like a recycling plant?

Salato isn't just about seeing the animals – it's *learning* about your environment. This guide will introduce you to our outdoor exhibits and habitat gardens. Want to know more?

Great! Our staff and volunteers will be happy to answer your questions!

1. Cove Forest (Mixed Mesophytic Forest) While hiking in Eastern Kentucky on a hot day, you may find quick relief in the most diverse forest in North America. Cove forests are found in moist, low-lying areas of the Appalachian Mountains and include trees such as Tulip Poplar (Kentucky's state tree), Hemlock, and Umbrella Magnolia. Is the stream in this exhibit wet or dry today? If it hasn't rained lately, it's probably dry. *Ephemeral streams* are created by heavy rains and snowmelt and flow only a short time before drying up again. These important temporary habitats last just long enough for the eggs of frogs, salamanders, and some insects to hatch and mature. Watch this exhibit grow as we plant and expand the forest.

2. A Symbol of Freedom

Bald eagles are "birds of prey" with sharp talons and hooked beaks for catching and eating meat – especially fish! This federally "threatened" species has a wingspan of up to 8 feet, builds nests over 5 feet wide, and can spot a meal from a mile away! Maybe this is why Morehead University selected it as their mascot. Can you use your "eagle eyes" to tell them apart? Wonder why these powerful birds don't fly away?

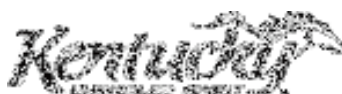
Unfortunately, they are permanently disabled and cannot fly. (*Note: it is illegal to possess feathers from birds of prey and songbirds.*)

3. Please Don't Feed the Bears!

North American Black Bears also come in blonde, cinnamon, and white – and all colors are *hungry*! These "omnivores" can consume 15,000 calories a day. Give it a try. That's 25 Big Macs! Their diet consists of nuts, roots, berries, insects, small animals, and garbage. Though it's true that black bears love honey, it's not true that they hibernate - they just sleep more in winter. Right now, black bears are making their way into Kentucky from Virginia, West Virginia, and Tennessee. If you see one, use common sense: respect its territory, never approach *any* wild animal, and no matter how hungry it claims to be, *please don't feed the bears!*

4. Wapiti Back in Kentucky

What's a *wapiti*? *Wapiti* means "white rump" in Shawnee and is another name for "elk". Elk disappeared from Kentucky in the mid 1800's due to unregulated hunting and habitat loss. Now, thanks to a successful reintroduction program by the KDFWR and the Rocky Mountain Elk Foundation, Kentucky boasts the largest elk herd east of the Mississippi! ...And people think Kentucky is just about horses. Elk are the noisiest members of the deer family. The bulls (males) bugle, the calves bleat and squeal, and the cows (females) bark, grunt, and squeal to communicate! Like deer, only the males have antlers and they shed them each winter and grow a new pair. We now have a herd of over 5,000 of these majestic animals in Kentucky.



5. Bison or Buffalo?

It's *bison*. European settlers mistook our bison for water buffalo – an unrelated animal. Both sexes have horns, which are made of the same material as your fingernails: keratin. Though deer and elk shed their antlers every year, bison keep their horns for life. The huge hump on its back is a muscle, used to hold up that enormous head! Bison initially carved out many of the roads we use today (like the Wilderness Trail) and lent their names to many places throughout the state, such as Buffalo Trace Distillery – the sponsor of this exhibit!

6. Prairie

The Bluegrass Region was once dominated by vast prairies and savannas. Native grasses and wildflowers were home to elk and bison, as well as insects, ground birds, and small mammals. While prairies have no trees, savannas have scattered oaks and other species which provide additional habitat for a diversity of wildlife. Prairies have declined throughout the state due to development and the invasion of exotic grasses like fescue. To help conserve these vital habitats, the KDFWR created the Habitat Improvement and Backyard Wildlife Programs to promote the use of native plants on private lands. Interested? Ask us for details!

7. Dragonfly Marsh

What do wildlife habitat, recycling, and flood control have in common? *A marsh!* Airborne pollutants and runoff are diluted in marshes and converted to non-toxic substances by microorganisms. As *buffer zones*, marshes help reduce the impact of flooding. Also, marsh plants like algae produce oxygen. On a warm, sunny day, you can often hear these bubbles of oxygen popping on the surface. Mainly, though, these wetlands provide habitat for many of Kentucky's native plants and wildlife, as well as critical rest stops for migratory waterfowl. This marsh is *full* of living things! Close your eyes and listen... Who do *you* hear?

8. Kentucky's Biggest "Big Cat"

Also known as a bay lynx, catamount, or wildcat, bobcats are best known in this state as the mascot of the University of Kentucky. In fact, the male in this exhibit is "Blue", the *official* UK Wildcat! Bobcats are nocturnal and very shy, but they are extremely effective predators, able to jump 8 feet high and 12 feet across to catch their prey. Even Michael Jordan can't top that! Their favorite meal? Small mammals like the cottontail rabbit. Though they may look and act like overgrown house cats, they're not! Either of these cats could easily remove a finger ...and would thank you for the meal. Remember: *Wild animals are always wild.*

9. Sharing Space

Deer and turkey use the same type of habitat and are often found living together. Both eat acorns, seeds, plants, fruits, and mushrooms, and prefer to live in areas with a combination of mature trees (like oaks) and open, grassy areas. Ben Franklin liked the **wild turkey** so much he tried to make it our National Symbol, but it lost out to you know



who. It would have been a good pick: the male's head is red, white, and blue! These "ground birds" can fly up to 55 mph, have excellent vision, and roost in trees at night to escape predators.

Unlike turkeys, **white-tailed deer** cannot roost in trees. To escape predators, deer evolved to be *fast!* These animals can run up to 45 mph, jump 8 feet high ...and they're also not bad swimmers. Infant deer, or *fawns*, have white spots for camouflage and lack a strong scent for their first few weeks to keep predators from finding them.

People sometimes find a fawn curled in tall grass by itself. Thinking that the mother has been killed or has abandoned it, they try to "rescue" the fawn by taking it home. Unfortunately, the doe usually *is* present, but hiding from the noisy human intruder. When a fawn is raised by humans it can rarely be returned to the wild. *If you find a fawn, please leave it where you find it!* Not long ago, deer and turkey were a rare sight in Kentucky, but thanks to successful wildlife management programs, both species are now flourishing!

10. Native or Exotic?

A *native* plant or animal is one that existed in Kentucky *before* Europeans arrived. Early settlers brought herbs, vegetables, and farm animals with them from other countries. Many of these flourished in our mild climate and naturalized to wild areas. Wild mustard, Day lilies, and honeysuckle bush are just a few examples of *exotic* species that have taken over Kentucky's landscape. Why is this a problem? Native Kentucky animals evolved to use native Kentucky plants – they need them to survive.

In this exhibit are found examples of native, warm season grasses, flowers, and shrubs. Feel free to walk among them and take a closer look! For wildlife, these grasses provide nutritious grazing, large numbers of seeds, nest materials, and escape routes for small animals to hide from predators.

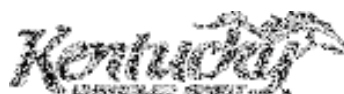
Across the trail you will see *fescue*, a genetically altered grass used widely for lawns and erosion control. Fescue crowds out native plants, provides poor quality graze, produces very few seeds, and forms mats so dense that animals cannot easily use it for escape or shelter.

11. Eastern Deciduous Forest

In the spring and summer this area is alive with beautiful colors. Wildflowers, which are adapted to the shade of this huge elm tree, provide food and shelter for native animals all year long. Within this area are several *micro-climates*. The area directly under the elm is shady and dry. It supports plants that are different from those in the sunny, wet meadow nearby. Kentucky has many fascinating plants. See if you can locate *Horsetail*. This ancient plant has been in Kentucky since dinosaurs roamed the Earth! You can find it fossilized in streambeds and cliff lines throughout the state.

KENTUCKY SPORTSMEN AND WOMEN PAY FOR CONSERVATION!

Salato and the KDFWR are funded by the sale of hunting and fishing licenses and by donations to the Kentucky Fish and Wildlife Foundation. We receive no General Tax Fund dollars. Please support us by purchasing a license or making a donation!



Name

KEY

SPEARS, SHOVELS, AND NUTCRACKERS

Most bird bills are like special tools. They are specially shaped to help get the kind of food they eat. See if you can match the bill to the type of tool it resembles.

On the line by each tool, write the name of the bird whose beak works like the tool.



Spoon beak

1. Roseate Spoonbill

Spear beak

2. Heron

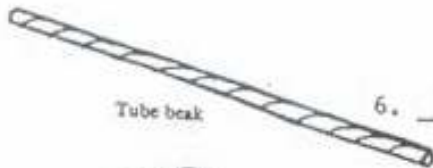
Cracker beak

3. Parrot

Pincer (tweezer) beak

4. Brown Creeper

Chisel beak

5. Woodpecker

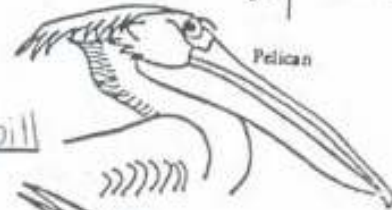
Tube beak

6. Hummingbird

Strainer beak

7. Pelican

Blue Parrot



Pelican



Heron



Roseate Spoonbill



Hummingbird



Brown Creeper



Woodpecker



Kentucky
COMMONWEALTH OF KENTUCKY

Bird Behavior Scavenger Hunt*

(Adapted from Flying WILD: An Educator's Guide to Celebrating Birds)

Using this bird-based version of a scavenger hunt, students will learn to identify different behavior patterns of birds and explain their function.

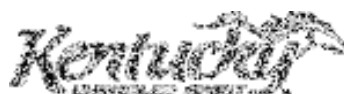
Choose an area where students are likely to see birds such as near a bird feeder station, a water source, a brush pile or large clumps of bushes, a forested area.

1. Discuss different types of bird behavior such as perching, singing, feeding, searching for food, preening feathers, or any others you can think of. Talk about why a bird might display a certain type of behavior; it might be an adaptation that helps the bird survive. (Flocking is an adaptation that helps birds by keeping it safe from predators by creating safety in numbers. Some birds can feed while others watch for predators and the whole flock has a better chance of driving away a predator than just one bird.) Some bird behaviors are very specific like the way a nuthatch climbs down a tree headfirst, others are more general.
2. Assign students to groups of 3 or 4; give each group a pair of binoculars, one of the laminated Observing Birds in the Wild Worksheet, and a dry-erase pen. Take students to the site where they'll conduct their search.
3. Have students look for a type of bird behavior, then place a check in the space provided on the worksheet that corresponds to the type of behavior they saw. Using a field guide, help the students try to identify the species of bird if possible.
4. After completing the observations, have students discuss why a particular behavior may be a benefit or detriment to the bird. Ask questions like: Were any behaviors not observed? Why? Did any species seem to be exhibiting a distinctive behavior? Why?

Optional:

5. Have each group act out a particular bird behavior and have the class guess what they are doing and why. Explain to the class how each behavior might benefit the bird.
6. A bird's behavior can sometimes help in identifying the bird. List one behavior you observed that helped identify the bird and explain why.

*Copies of Project Flying WILD's Bird Behavior Scavenger Hunt and all other resources in the Teacher's Field Kit are available at the Salato Wildlife Education Center front desk upon request.



Observing Birds in the Wild Worksheet

Look for the behaviors listed below. Check those you find, then list the bird's specific location and habitat. If you can, identify the species. If not, list some identifying features.

Check	Behavior Observed	Specific Location and Habitat	Identification
<input type="checkbox"/>	Singing or calling (what notes?)		
<input type="checkbox"/>	Preening (sometimes looks as if it is rubbing, scratching, or covering its feathers with its beak)		
<input type="checkbox"/>	Bathing in water		
<input type="checkbox"/>	Drinking a drink from		
<input type="checkbox"/>	Soaring		
<input type="checkbox"/>	Flying (on wings are beating)		
<input type="checkbox"/>	Perching on a limb or branch		
<input type="checkbox"/>	Hovering in mid-air (wings beating rapidly)		
<input type="checkbox"/>	Swimming		
<input type="checkbox"/>	Walking or hopping on the ground		
<input type="checkbox"/>	Diving or flipping up its rump in the water		
<input type="checkbox"/>	Searching on the ground		
<input type="checkbox"/>	Waiting in water		
<input type="checkbox"/>	Feeding		
<input type="checkbox"/>	Flying with a sound or sound in the mouth		
<input type="checkbox"/>	Flying with or gathering twigs, grasses, leaves, straw, etc.		
<input type="checkbox"/>	Perched on the edge of a nest		
<input type="checkbox"/>	Climbing a trunk or branch		
<input type="checkbox"/>	Clinging upside down from a branch		
<input type="checkbox"/>	Clutching (on) the side of a limb or branch		
<input type="checkbox"/>	Perching on a limb, fence post, tree limb, over an open area		
<input type="checkbox"/>	A group of birds perching together on a particular object or area		
<input type="checkbox"/>	A flock of small birds chasing a larger bird		
<input type="checkbox"/>	A group of birds feeding together		
<input type="checkbox"/>	Other (list behavior)		



Kentucky
UNCOMMON SENSE

ECOLOGY BINGO*

Ecology Bingo takes your students on a high speed adventure through Salato's paved and non-paved trails. This activity is designed to use all of the senses: vision, hearing, touch, and Students may work alone or in groups to complete the bingo activity.

Materials

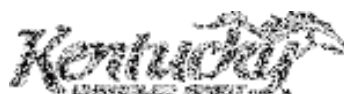
Ecology bingo cards

Crayons, markers, or pencils


Instructions

- 1) Students must search indoors and outdoors for the items listed on the bingo sheet.
- 2) Mark each item when it is found or task is completed.
- 3) If assistance is needed, please consult any uniformed personnel.
- 4) Game is completed when a row or the entire card is finished.

* Other versions of the bingo card are available in the Teacher's Field Kit.



**SALATO
ECOLOGY
BINGO**

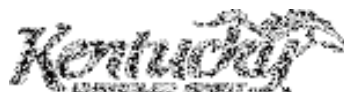
ANIMAL TRACK	FIND A NEST	HALF EATEN NUT	ANIMAL THAT JUMPS	SOMETHING FUZZY
SMELL A FLOWER	AN ENDANGERED SPECIES	ANIMAL WITH TWO OR MORE COLORS	A RED BERRY	EXOTIC PLANT SPECIES
AN ANIMAL THAT IS CAMOUFLAGED	A SOUND YOU HAVE NEVER HEARD		SEED THAT TRAVELS BY WIND	A LEAF WITH TEETH
FUNGUS	SOMETHING PURPLE	INSECT OTHER THAN A SPIDER	RACCOON TRACK	4 THINGS THAT MAKE A HABITAT
ROUND OBJECT OR ANIMAL	WALK THROUGH A PRAIRIE	WALK THROUGH THE FOREST	COMPOUND LEAF	TWO DIFFERENT AQUATIC HABITATS



NATURE JOURNAL INSTRUCTIONS

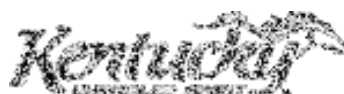
Educators, please take a moment before you leave to write down your impressions of the Salato Wildlife Education Center, the KDFWR Headquarters, the Teacher's Field Pack, etc. We want to hear from you, so sign our orange field notebook in the front of this notebook. Thank you and we hope that you have had a memorable experience at our facility.

Salato Staff



Bird Observation Form Instructions

Encourage your students to explore all of the grounds of Salato Wildlife Education Center and the Kentucky Department of Fish and Wildlife Resources Headquarters. As they walk, write down on the enclosed observation forms any birds and the habitat they occupy. Use the field guides to identify the species they encounter. Observe as many characteristics as you can and ask questions of our staff to help the students to identify what they see. We cannot wait to see what you and your students are seeing at Salato.



Location _____ Date _____

Observer(s) _____

Comments

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and extend across the width of the page. There are no margins, text, or other markings on the paper.



The Dr. James C. Salato Wildlife Education Center
1 Sportsman's Lane, Frankfort, KY 40601
(502)564-7863 or (800)852-0942 ext. 331 fax: (502)564-2179
and visit us online @ fw.ky.gov

Teacher's Field Kit Evaluation

Please take a moment to fill out this evaluation form. Your feedback and opinions help us improve our programs so tell us what you think!

School: _____

Name (optional): _____

E-mail (optional): _____

Pack Name: _____

		POOR		EXCELLENT	
1.	Was your learning pack well supplied?	1	2	3	4
2.	Were the activities appropriate to your students' needs and abilities?	1	2	3	4
3.	Did the activities create opportunities for student interaction?	1	2	3	4
4.	Would you recommend the learning packs to other teachers?	1	2	3	4
5.	Please rate your overall experience at the Salato Center.	1	2	3	4

How did you first learn of the Salato Center?

How often do you visit the Salato Center?

Additional Comments:

Thanks again for your time and we look forward to serving your future needs for environmental education and outdoor recreation. Contact us at any time if you have further comments or suggestions about how we might improve our programs!

"Reconnecting people and nature... for life"

